Appl. No. 10/559,737 Attorney Docket No. 89227.0011 Amdt. Dated July 16, 2010 Customer No. 26021

Reply to Office Action of April 19, 2010

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A phosphazene compound, obtained by reacting a phenoxyphosphazene compound (A-1) having a phenolic hydroxyl group and/or a cross-linked phenoxyphosphazene compound (A-2) obtained by cross-linking the phenoxyphosphazene compound (A-1) with an epoxy compound (B) having an unsaturated double bond and/or—an—isocyanate—compound—(C), wherein the phosphazene compound has an unsaturated double bond and a phenolic hydroxyl group in its molecule; and

the epoxy compound (B) is at least one epoxy compound selected from the group consisting of glycidylmethacrylate, glycidylacrylate, allylglycidylether, glycidylvinylether, and a compound represented by the following formula (10)

... (10)

wherein r represents an integer ranging from 0 to 40, and R⁸ represents H or a methyl group.

 (Original) The phosphazene compound as set forth in claim 1, wherein the phenoxyphosphazene compound (A-1) is a circular phenoxyphosphazene compound (A-11) represented by formula (1)

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...(1)

where m represents an integer ranging from 3 to 25, and each of R^1 and R^2 represents a phenyl group or a hydroxyphenyl group, and a single molecule has one or more hydroxyphenyl groups.

3. (Withdrawn) The phosphazene compound as set forth in claim 1, wherein the phenoxyphosphazene compound (A-1) is a chain phenoxyphosphazene compound (A-12) represented by formula (2)



... (2)

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where n represents an integer ranging from 3 to 10000, and each of \mathbb{R}^3 and \mathbb{R}^4 represents a phenyl group or a hydroxyphenyl group, and a single molecule has one or more hydroxyphenyl groups, and \mathbb{R}^5 represents $-N=P(OC_6H_5)_3$, $-N=P(OC_6H_5)_2(OC_6H_4OH)_2$, $-N=P(OC_6H_4OH)_3$, $-N=P(O)OC_6H_5$, or $-N=P(O)(OC_6H_4OH)_4$, and \mathbb{R}^6 represents $-P(OC_6H_5)_4$, $-P(OC_6H_5)_4(OC_6H_4OH)_4$, $-P(OC_6H_5)_4(OC_6H_4OH)_5$, $-P(OC_6H_5)_4(OC_6H_4OH)_4$, $-P(OC_6H_5)_4(OC_6H_4OH)_4$, $-P(OC_6H_5)_4(OC_6H_4OH)_4$, $-P(OC_6H_5)_4(OC_6H_4OH)_4$, $-P(OC_6H_5)_4(OC_6H_4OH)_4$, $-P(OC_6H_5)_4(OC_6H_4OH)_5$, $-P(OC_6H_5)_4(OC_6H_4OH)_4$, $-P(OC_6H_5)_4(OC_6H_5)_4(OC_6H_4OH)_4$, $-P(OC_6H_5)_4(OC_6H_5)_4(OC_6H_5)_4(OC_6H_5)_4$

4. (Withdrawn) The phosphazene compound as set forth in claim 1, wherein the cross-linked phenoxyphosphazene compound (A-2) is obtained by cross-linking the phenoxyphosphazene compound (A-1) on the basis of a phenylene cross-linking group having at least one of an o-phenylene group, a m-phenylene group, a p-phenylene group, and a bisphenylene group represented by formula (3)

$$\mathbb{R}^{\frac{7}{p}}$$

where R7 represents -C(CH₃)₂-, -SO₂-, -S-, or -O-, and p represents 0 or 1.

5. (Withdrawn) The phosphazene compound as set forth in claim 4, wherein the cross-linked phenoxyphosphazene compound (A-2) is a phenylene crosslinked phenoxyphosphazene compound (A-3) in which

the circular phenoxyphosphazene compound (A-11) and/or the chain phenoxyphosphazene compound (A-12) is used as the phenoxyphosphazene compound, and

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the phenylene cross-linking group intervenes between two oxygen atoms obtained by desorbing a phenyl group and a hydroxyphenyl group from the phenoxyphosphazene compound (A-1) so that a ratio at which the phenyl group and the hydroxyphenyl group are contained in the cross-linked phenoxyphosphazene compound ranges from 50 to 99.9 % with respect to a total of a phenyl group and a hydroxyphenyl group of the phenoxyphosphazene compound, the phenylene cross-linked phenoxyphosphazene compound (A-3) including at least one phenolic hydroxyl group.

- (Previously presented) A photosensitive resin composition, comprising at least the phosphazene compound as set forth in claim 1 and a soluble polyimide resin (D) which is soluble in an organic solvent.
- 7. (Original) The photosensitive resin composition as set forth in claim 6, further comprising a photoreaction initiator (E-1).
- (Previously presented) A photosensitive resin composition, comprising at least the phosphazene compound as set forth in claim 1 and a photoreaction initiator (E-1).
- (Previously presented) The photosensitive resin composition as set forth in claim 6, further comprising a compound having a carbon-carbon double bond (E-4).
- 10. (Original) The photosensitive resin composition as set forth in claim 6, wherein 1 wt% or more of the soluble polyimide resin (D) is dissolved in at least one kind of an organic solvent selected from dioxolane, dioxane, tetrahydrofuran, N,N-

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dimethylformamide, N,N-dimethylacetamide, and N-methyl-2-pyrrolidone at temperature ranging from room temperature to 100°C.

- 11. (Previously presented) A photosensitive resin film, being formed by using the photosensitive resin composition as set forth in claim 6.
- 12. (Original) The photosensitive resin film as set forth in claim 11, being used as a print wiring board adhesive sheet, a photosensitive cover lay film, a print wiring insulative protection film, or a print wiring board substrate.
- 13. (Withdrawn) A photosensitive resin composition having at least a polyimide resin (G) and a phosphazene compound (H),

said photosensitive resin composition comprising: a soluble polyimide resin (G-1), which has a carboxyl group and/or a hydroxyl group and is soluble in an organic solvent, as the polyimide resin (G); and

a phenoxyphosphazene compound (H-1) having a phenolic hydroxyl group and/or a cross-linked phenoxyphosphazene compound (H-2), which is obtained by cross-linking the phenoxyphosphazene compound (H-1) and has at least one phenolic hydroxyl group, as the phosphazene compound (H),

said photosensitive resin composition further comprising a (meth)acrylic compound (I).

14. (Withdrawn) The photosensitive resin composition as set forth in claim 13, wherein the phenoxyphosphazene compound (H-1) includes a circular phenoxyphosphazene compound (H-11) represented by formula (1)

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...(1)

where m represents an integer ranging from 3 to 30, and each of R1 and R2 represents a phenyl group or a hydroxyphenyl group, and a single molecule has one or more hydroxyphenyl groups.

15. (Withdrawn) The photosensitive resin composition as set forth in claim
13, wherein the phenoxyphosphazene compound (H-1) includes a chain
phenoxyphosphazene compound (H-12) represented by formula (2)



..(2)

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where n represents an integer ranging from 3 to 10000, and each of R^3 and R^4 represents a phenyl group or a hydroxyphenyl group, and a single molecule has one or more hydroxyphenyl groups, and R^5 represents $-N=P(OC_6H_5)_3$, $-N=P(OC_6H_5)_2(OC_6H_4OH)$, $-N=P(OC_6H_5)(OC_6H_4OH)_2$, $-N=P(OC_6H_4OH)_3$, $-N=P(O)(OC_6H_5)$, or $-N=P(O)(OC_6H_4OH)$, and R^6 represents $-P(OC_6H_5)_4$, $-P(OC_6H_5)_4(OC_6H_4OH)$, $-P(OH_6H_5)_2(OC_6H_4OH)_2$, $-P(OC_6H_5)(OC_6H_4OH)_3$, $-P(OC_6H_5)(OC_6H_4OH)_4$, $-P(OC_6H_5)_4$, $-P(O(OC_6H_5)_4$, $-P(O(OC_6H_5)_4$, $-P(O(OC_6H_5)_4$), or $-P(O(OC_6H_5)_4$.

16. (Withdrawn) The photosensitive resin composition as set forth in claim 13, wherein the cross-linked phenoxyphosphazene compound (H-2) is obtained by cross-linking the phenoxyphosphazene compound (H-1) on the basis of a phenylene cross-linking group having at least one of an o-phenylene group, a m-phenylene group, a p-phenylene group, and a bisphenylene group represented by formula (3)

$$-\sqrt{\mathbb{R}^7} \mathbb{R}^7 = \mathbb{R}^7 \mathbb$$

where R7 represents -C(CH3)2-, -SO2-, -S-, or -O-, and p represents 0 or 1.

17. (Withdrawn) The photosensitive resin composition as set forth in claim 16, wherein the cross-linked phenoxyphosphazene compound (H-2) is a phenylene cross-linked phenoxyphosphazene compound (H-21) in which

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the circular phenoxyphosphazene compound (H-11) and/or the chain phenoxyphosphazene compound (H-12) is used as the phenoxyphosphazene compound, and

the phenylene cross-linking group intervenes between two oxygen atoms obtained by desorbing a phenyl group and a hydroxyphenyl group from the phenoxyphosphazene compound (H-1) so that a ratio at which the phenyl group and the hydroxyphenyl group are contained in the cross-linked phenoxyphosphazene compound ranges from 50 to 99.9 % with respect to a total of a phenyl group and a hydroxyphenyl group of the phenoxyphosphazene compound, said phenylene cross-linked phenoxyphosphazene compound (H-21) including at least one phenolic hydroxyl group.

- 18. (Withdrawn) The photosensitive resin composition as set forth in claim 13, wherein the soluble polyimide resin (G-1) has at least one kind of an unsaturated double bond selected from an acryl group, a methacryl group, a vinyl group, and an allyl group.
- 19. (Withdrawn) The photosensitive resin composition as set forth in claim 13, wherein an amount of the phosphazene compound (H) ranges from 1 to 100 parts by weight with respect to 100 parts by weight corresponding to a total weight of the polyimide resins (G) and the (meth)acrylic compound (I).
- (Withdrawn) A photosensitive resin film, being formed by using the photosensitive resin composition as set forth in claim 13.

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21. (Withdrawn) The photosensitive resin film as set forth in claim 20, wherein: in case of using 1 wt% of sodium hydroxide whose temperature is 40°C as a developer and using a spray developing device as developing means,

dissolution time under a spray pressure of 0.85 MPa is 180 seconds or less.

- 22. (Withdrawn) The photosensitive resin film as set forth in claim 20, being used as a pattern circuit resist film, a photosensitive cover lay film, or a photosensitive dry film resist.
- 23. (Withdrawn) A photosensitive resin composition, comprising a soluble polyimide resin (K) having a carboxyl group and/or a hydroxyl group, a phenoxyphosphazene compound (L), and a (meth)acrylic compound (M),

said phenoxyphosphazene compound (L-1) including at least one of a circular phenoxyphosphazene compound (L-1) represented by formula (22) and a chain phenoxyphosphazene compound (L-2) represented by formula (23),

... (22)

where a represents an integer ranging from 3 to 30,

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where R²⁵ represents group-N=P(OPh)₃ or group-N=P(O)OPh, and R²⁶ represents group-P(OPh)₄ or group-P(O)(OPh)₂, and b represents an integer ranging from 3 to 10000, wherein

the phenoxyphosphazene compound (L) includes a cross-linked phenoxyphosphazene compound (L-3) having a structure cross-linked by causing a cross-linking group having any one of an o-phenylene group, an m-phenylene group, a p-phenylene group, and a bisphenylene group represented by formula (3) to intervene between two oxygen atoms obtained by desorbing a phenyl group,

where R7 represents -C(CH₃)₂-, -SO₂-, -S-, or -O-, and p represents 0 or 1.

- 24. (Withdrawn) The photosensitive resin composition as set forth in claim 23, wherein a soluble polyimide resin serving as the component (K) has at least one kind of a carbon-carbon double bond selected from an acryl group, a methacryl group, a vinyl group, and an allyl group.
- 25. (Withdrawn) The photosensitive resin composition as set forth in claim 23, wherein an amount of the component (L) ranges from 1 to 100 parts by weight with respect to 100 parts by weight corresponding to a total weight of the components (K) and (L).

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- 26. (Withdrawn) A photosensitive dry film resist, produced by using the photosensitive resin composition as set forth in claim 23.
- 27. (Withdrawn) The photosensitive dry film resist as set forth in claim 26, wherein: in case of using 1 wt% of sodium hydroxide whose temperature is 40°C as a developer and using a spray developing device as developing means.

dissolution time under a spray pressure of 0.85 MPa is 180 seconds or less.

28. (Withdrawn) A print wiring board, using the photosensitive dry film resist as set forth in claim 26 as an insulative protection layer.